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Glass in building — Laminated glass and laminated safety glass —

Part 6: **Appearance**

Verre dans la construction — Verre feuilleté et verre feuilleté de sécurité —

Partie 6: Aspect

Reference number
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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 160, *Glass in building,* Subcommittee SC 1, *Product considerations,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 129, *Glass in building,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 12543-6:2011) and the technical corrigendum ISO 12543-6:2011/Cor 1:2012, which have been technically revised.

The main changes compared to the previous edition are as follows:

— some definitions have been revised;

— a paragraph on laminated glass incorporating thermally treated glasses has been added;

— a method of observation of glasses by pack for jumbos or stock sizes has been added.

A list of all parts in the ISO 12543 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Glass in building — Laminated glass and laminated safety glass —

Part 6: Appearance

1 Scope

This document specifies defects of finished sizes and test methods with regard to the appearance of laminated glass and laminated safety glass when looking through the glass.

All references to laminated glass in this document refer to both laminated glass and laminated safety glass.

NOTE Special attention is paid to acceptability criteria in the vision area.

This document is applicable to finished sizes at the time of supply.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 12543-1, *Glass in building — Laminated glass and laminated safety glass — Part 1: Definitions and description of component parts*

ISO 12543-5, *Glass in building — Laminated glass and laminated safety glass — Part 5: Dimensions and edge finishing*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12543-1, and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
spot defect
type of defect that includes *opaque spots* (3.3), bubbles and *foreign bodies* (3.4)

3.2
linear defect
type of defect that includes *foreign bodies* (3.4) and *scratches* (3.5) or *grazes* (3.6)

3.3
opaque spot
visible defects in the laminated glass

EXAMPLE Tin marks and inclusions in the glass or interlayer.

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3.4
foreign body
unwanted item introduced into the laminated glass during manufacture

3.5
scratch
linear damage to the outside surface of the laminated glass

3.6
graze
damage to the outside surface of the laminated glass

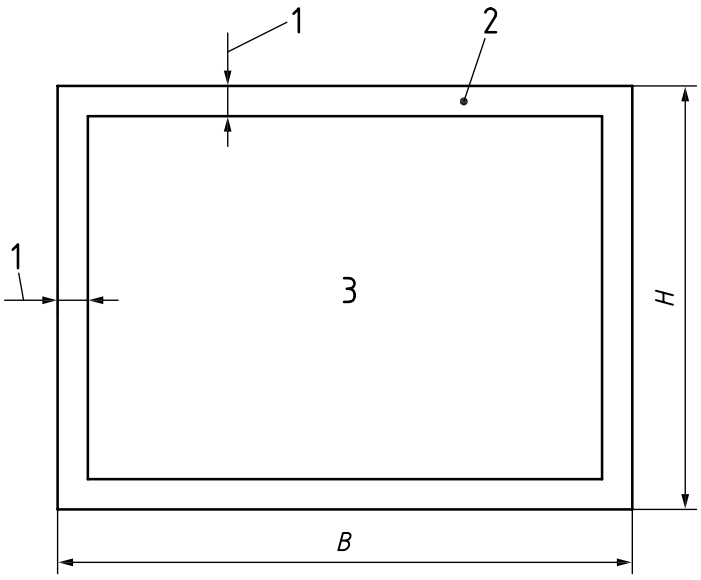
3.7
vent
sharp tipped fissure or crack running into the glass from an edge

3.8
crease
distortion introduced into the interlayer by folds visible after manufacture

3.9
streak
distortion in the interlayer, caused by manufacturing defects in the interlayer or due to interlayer inhomogeneity, that are visible after manufacture

3.10
edge area
perimeter of the pane which is generally contained within the glazing system

Note 1 to entry: For pane sizes that are less than 5 m^2, the width of the edge area as given in Figure 1 is 15 mm. The width of the edge area is increased to 20 mm for pane sizes that are greater than 5 m^2.



Key

B	width	2	edge area
H	length	3	main area
1	width of edge area		

Figure 1 — Areas to be examined on finished sizes ready for glazing

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3.11
vision area
main area of the glass that excludes the edge area

4 Method of observation

The laminated glass is put in a vertical position, in front of and parallel to a matt grey screen, and is lit by diffuse daylight or equivalent.

The laminated glass is visually inspected perpendicularly at a distance of 2 m from the glass, with the matt screen on the other side of the glass.

Any visible defects that are disturbing shall be marked.

An alternative method of observation by pack is given in Annex A.

5 Vents

Vents are not permitted.

6 Creases and streaks

Creases and streaks are not permitted in the vision area.

7 Defects in the vision area

7.1 Spot defects in the vision area

When inspected according to the method given in Clause 4, the admissibility of spot defects depends on the following:

— size of the defect;

— frequency of the defect;

— number of panes as components of a laminated glass.

The number of permissible defects in a pane shall be in accordance with Table 1.

Defects less than 0,5 mm shall not be considered.

Defects greater than 3 mm shall not be permitted.

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